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# Sexual Functioning and Behavior of Men with Body Dysmorphic Disorder Concerning Penis Size Compared with Men Anxious about Penis Size and with Controls: A Cohort Study

David Veale, MD, FRCPsych,* Sarah Miles, MSc,* Julie Read, MA,* Andrea Troglia, PsyD,* Kevan Wylie, FRCP, FRCPsych, FECSM,† and Gordon Muir, FRCS‡

*Institute of Psychiatry, Psychology and Neurosciences, Kings College London, South London and Maudsley NHS Foundation Trust, London, UK; †Porterbrook Clinic, Sheffield Health and Social Care NHS Foundation Trust, Sheffield, UK; ‡King's College Hospital, NHS Foundation Trust, London, UK

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**ABSTRACT**

***Introduction.*** Little is known about the sexual functioning and behavior of men anxious about the size of their penis and the means that they might use to try to alter the size of their penis.
***Aim.*** To compare sexual functioning and behavior in men with body dysmorphic disorder (BDD) concerning penis size and in men with small penis anxiety (SPA without BDD) and in a control group of men who do not have any concerns.
***Methods.*** An opportunistic sample of 90 men from the community were recruited and divided into three groups: BDD (n = 26); SPA (n = 31) and controls (n = 33).
***Main Outcome Measures.*** The Index of Erectile Function (IEF), sexual identity and history; and interventions to alter the size of their penis.
***Results.*** Men with BDD compared with controls had reduced erectile dysfunction, orgasmic function, intercourse satisfaction and overall satisfaction on the IEF. Men with SPA compared with controls had reduced intercourse satisfaction. There were no differences in sexual desire, the frequency of intercourse or masturbation across any of the three groups. Men with BDD and SPA were more likely than the controls to attempt to alter the shape or size of their penis (for example jelqing, vacuum pumps or stretching devices) with poor reported success.
***Conclusion.*** Men with BDD are more likely to have erectile dysfunction and less satisfaction with intercourse than controls but maintain their libido. Further research is required to develop and evaluate a psychological intervention for such men with adequate outcome measures. **Veale D, Miles S, Read J, Troglia A, Wylie K, and Muir G. Sexual functioning and behavior of men with body dysmorphic disorder concerning penis size compared with men anxious about penis size and with controls: A cohort study. Sex Med **;**:**–**.**

***Key Words.*** Small Penis Anxiety; Body Dysmorphic Disorder; Sexual Function; Small Penis Syndrome

## Introduction

For men, penis size is often considered a sign of masculinity and sexual prowess. Social and cultural beliefs, which might indicate penis size as of importance, might leave men fearful of negative evaluation when their penis is exposed in sexual situations leading to impaired sexual function.

Small penis anxiety (SPA) (also known as "small penis syndrome") has been described in the literature in men who are dissatisfied or excessively worried about their penis size which is in the normal range [1]. This definiton excludes men with a micropenis [2]. Some men experiencing excessive worry or shame about penis size may meet criteria for a diagnosis of Body Dysmorphic Disorder (BDD) [3]. Individuals with BDD are excessively *preoccupied* with a perceived defect in their appearance that is either not observable to others or appears only slight. The individual normally performs repetitive behaviors (e.g., checking or comparing) in response to the concerns. They must also experience clinically significant distress or impairment in social, occupational, or other important areas of functioning. BDD in specialist psychiatric settings is associated with a high rate of suicide ideation and completed suicide [4,5]. It is often chronic with an onset during adolescence but can take 10 years before obtaining adequate treatment [4,5]. The preoccupation in BDD is most commonly on the face. Occasionally in men it is focused on their penis size [4,5]. It was hypothesized that BDD and SPA would interfere in sexual behavior and reduce the frequency of sexual behavior more than in men without concerns because they are generally more impaired.

Individuals with BDD commonly seek cosmetic procedures with the hope that the appearance of their perceived flaw(s) can be significantly improved [6,7]. A number of surgical case studies have described men seeking phalloplasty augmentation as having BDD related to the penis [8–10]. Penile length augmentation can include suspensory ligament release; prepubic liposuction; penile disassembly and cartilage transplant; girth augmentation can include lipoinjection; dermal graft; temporalis fascia transfer; saphenous vein grafts and injection of synthetic materials which have been comprehensively reviewed in the literature [11]. People with BDD may also perform D.I.Y (do it yourself) surgery—an attempt to correct their perceived physical flaw(s) themselves [12]. Thus some men preoccupied by their penis size have injected Vaseline in to their penis [13]. Reports of penile augmentation in men with BDD have not been based on any structured diagnostic interview for BDD or a validated screening scale. Therefore, some of the participants reported may not meet criteria for BDD. Cosmetic phalloplasty is regarded as experimental for men with small penis anxiety without any adequate outcome measures or evidence of safety [11]. Furthermore, in retrospective case series the diagnosis of BDD may be associated with a poor outcome in most cosmetic procedures [6,14–17].

Penis size is considered important to homosexual men in terms of how they construct their sense of self [18], how they construct masculinity and that they recognize a notion of "bigger is better" when defining an ideal male partner [19]. Homosexual men's perceptions of size are significantly related to sexual positioning as those with smaller perceived size more often assume the anally submissive sexual position [20]. Grove et al. [21] subsequently reported that 86% of their men had measured their penile size. While penis size is important among the male homosexual community, previous research has indicated that homosexual men have a vulnerability to body dissatisfaction in comparison with heterosexual men [22,23].

Recent research investigated the phenomenology of men with BDD exclusively or mainly related to penile size [24,25]. Results found that men with BDD concerning their penis reported greater shame and interference in relationships compared with men with small penis anxiety and controls. The shame provoking situations that are avoided can be broadly categorized into (i) displaying a flaccid penis in public situations (for example in changing rooms) and (ii) displaying a flaccid or an erect penis with a sexual partner. Most of the safety seeking behaviors can be divided into either threat detection (e.g., measuring the size or comparing) and avoidance or camouflage (e.g., changing one's posture to avoid their penis being seen). Furthermore, men with BDD were found to score higher on symptoms of general psychopathology (e.g., low mood, general anxiety and quality of life) in comparison with men with small penis anxiety or no concern. However, little is known about whether or not the perceived shame of a small penis affects sexual functioning and behavior. The same dataset used in the study on phenomenology and characteristics of such men was used in this study [25].

### Aims

Given the severity of BDD and SPA and the limited existing research on BDD exclusively or mainly related to the penis, this study sought to investigate the sexual functioning and behavior of men with BDD relating to penis size and whether or not they could be differentiated from men with SPA and those who are unconcerned about their

penis size. Our hypothesis was that men with BDD concerning small penis size were more likely to experience erectile dysfunction and overall poor sexual satisfaction compared with men with small penis anxiety and men unconcerned with penis size.

## Methods

The study consisted of a group cohort design comparing men with BDD exclusively or mainly related to their penis against men with SPA and controls who did not report any concerns with their penis size.

### *Participants*

All men were recruited from one of three sources: (i) by email to staff and students at King's College London (n = 36), (ii) by email to a database of volunteers at the Institute of Psychiatry, Kings College London (n = 10) and (iii) by a link on the website "Embarrassing Bodies" (n = 44). Embarrassing Bodies is an informative television program aired on Channel 4 in which members of the public present to a doctor with physical and medical concerns (often rare or unusual). The program has its own website on which members of the public can both learn about the body and related illnesses as well as post queries to professionals. The authors approached the producers who organized for an advertisement and study contact details to be posted on the website.

In total, 90 participants were included in the study. The inclusion criteria for taking part were that men had to be aged 18 or above and proficient in English in order to provide consent and complete online survey questionnaires. Our exclusion criteria were men who:

1. Had a micropenis (defined as 6 cm or less in the flaccid state) [2]
2. Had a penile abnormality (e.g., Peyronie's disease, hypospadias, intersex, phimosis)
3. Had any had penile or prostatic surgery (which may affect penis size).
4. Had any condition associated with length loss or "acquired short penis," secondary to a disease or an intervention. e.g., prostate radiation, prostate cancer hormonal treatment, diabetes with severe penile atrophic damage.

The Queen Square NHS Research Ethics Committee granted ethics permission for the completion of the research (Reference 11/LO/0803).

### Main Outcome Measures

All participants completed the following questionnaires online.

#### *Demographic Information*

Information was collected on age, marital status, ethnic origin, employment status and sexual orientation.

#### *Penis Size*

Penile length was measured in order to exclude men who had a micropenis by an urologist using a standard disposable medical measuring tape.

#### *Sexual History*

Participants were asked about their sexual orientation; the age when they first had intercourse; the number of sexual partners they had had in their lifetime; the number of sexual partners lasting 3 months or longer; the age they first started to masturbate; the frequency of masturbation; the frequency of accessing pornography and the frequency of sexual intercourse per month.

#### *International Index of Erectile Function (IIEF) [26]*

The IIEF is a 15-item self-report scale that has five subscales: erectile function (score range 0–30), orgasmic function (range 0–10), sexual desire (range 0–10), intercourse satisfaction (range 0–15), and overall satisfaction (range 0–10). Across all 5 subscales, a higher score indicates higher levels of sexual functioning. Cronbach's alpha for the total scale was 0.90, and alpha values for each of the 5 subscales ranged from 0.70 to 0.90, indicating good internal reliability. After 4 weeks, test-retest reliability coefficients ranged from 0.64 to 0.84, indicating high positive correlation.

#### *Structured Clinical Interview for DSM-IV (SCID) [27]*

The SCID was used in order to determine whether or not the men worried about their penis size met criteria for a diagnosis of BDD. DSM-IV was used as the study commenced before publication of DSM-5. Those in SPA group were defined as expressing worries about their penis size but not meeting criteria for BDD.

#### *Interventions*

Participants were asked if they have made any previous attempt to alter the size or shape of their penis; what type of procedure they have used; the degree of cosmetic success of the procedure (on a scale of 0–8, where 0 was "very much worse" and 8

was "very much improved") and how much the procedure(s) reduced their preoccupation with their penis size and self-consciousness (on the same a scale of 0–8).

### *Procedure*

Advertisements for participants sought to recruit men to a study that was interested in their beliefs and concerns about their penis size. After completing the questionnaires online, men who expressed any concerns or worries about their penis size were interviewed with the SCID by a research psychologist either face to face or over the telephone, when they were unable to come to the clinic [27]. Participants then came to an outpatient urology department for an examination to exclude a micropenis or other abnormalities. On arrival, participants completed a consent form and were then given privacy in an air-conditioned consulting room at a constant temperature (21°C) at sea level. Using a disposable tape measure, each participant was measured in the flaccid state from pubis to distal glans (bone-to-tip).

Twelve men were unable to attend the clinic. In order to exclude a micropenis (that would exclude them from the study), they were sent standardized instructions guided with a tutorial video compiled by expert urologists, on how to administer self-measurement and email the results to the researchers and to report any penile abnormalities (e.g., curvature). In addition the SCID was conducted over the telephone.

### *Statistical Analysis*

Data were analyzed using SPSS v20. Fisher's Exact Tests were run to calculate differences in categorical variable frequencies across groups. As Kolmonogorov–Smirnov, skew and kurtosis tests indicated that the data were normally distributed, one way ANOVAs were run to compare continuous variables across the three groups. All tests were two tailed. Where one comparison is made, alpha levels were set at 0.05, however where multiple post hoc comparisons were made for mean age, a Bonferroni correction was used to reduce type 2 error; as comparisons were made between three groups, the standard alpha value of 0.05 was divided by 3 to given a new alpha value of 0.017.

## Results

All the participants were identified as being in the normal range for penis size. None were close to a micropenis and therefore none were excluded for this reason. The flaccid length measurements in all the participants were between 7 cm and 13 cm.

Men with BDD were significantly older than men with SPA and controls (Table 1). Of those with a concern about penis size there were no differences between the age at which men with BDD and SPA first started to think their penis was small or the age at which penis size became a significant problem for them. However, men with BDD did seek help for their size related concern at a significantly older age than men with SPA. There were no significant differences between the groups for marital status, employment status, or ethnicity.

There were no significant differences between groups for the frequencies who have had any previous sexual experience, mean age of first sexual experience, mean number of previous sexual partners or long term sexual partners, or their frequencies of sexual intercourse per month (Table 2). The median number of sexual partners is reported as well as the mean because the range of frequencies from 0 to 600 could be considered misleading. The groups also did not differ on their ages and frequencies of masturbation or pornography use.

**Table 1** Demographic comparisons between BDD, SPA and control groups at baseline

| | BDD group | Small penis anxiety group | Control group | Comparison |
|---|---|---|---|---|
| **n** | 26 | 31 | 33 | |
| ***Mean* age, (*SD*)** | 42.04 (10.01) | 31.77 (10.61) | 32.42 (13.06) | $F(2, 88) = 7.02$, $P = 0.001$<br>BDD × SPA $t(55) = -3.73$, $P < 0.001$, $d = 0.98$<br>BDD × Control $t(57) = -3.10$, $P = 0.003$, $d = 0.91$<br>SPA × Control $t(62) = 0.218$, $P = 0.828$, $d = 0.01$ |
| ***Mean* age men started to think their penis was small, (*SD*)** | 16.46 (9.18) | 15.39 (3.64) | *n/a* | $t(55) = -0.565$, $P = 0.574$ |
| ***Mean* age penis size became a significant problem, (*SD*)** | 19.00 (9.18) | 18.08 (4.30) | *n/a* | $t(55) = -0.452$, $P = 0.653$ |
| ***Mean* age sought help for size related concern, (*SD*)** | 30.35 (12.12) | 23.61 (11.83) | *n/a* | $t(55) = -2.06$, $P = 0.046$ |

**Table 2** Sexual history of BDD, SPA, and control participants

| Measure | BDD group n = 26 | Small penis anxiety group n = 31 | Control group n = 33 | Comparison ANCOVA/Fisher's Exact Test |
|---|---|---|---|---|
| Previous sexual experience, n *(%)* | 23 (88.5) | 30 (96.8) | 32 (97) | Fisher's Exact Test $P = 0.432$ |
| *Mean* age at first sexual experience *(SD)* | 17.17 (5.80) | 19.13 (5.78) | 18.66 (2.77) | *n/a* |
| *Mean* number of previous sexual partners *(SD)* | 22.15 (29.37) | 35.90 (94.15) | 36.16 (105.00) | $F(2, 86) = 1.60$, $P = 0.209$ |
| *Median* number of previous sexual partners | 12.50 | 6.00 | 12.50 | |
| *Mean* number of long-term sexual partners *(SD)* | 3.12 (2.76) | 2.13 (1.50) | 2.94 (2.95) | $F(2, 86) = 0.823$, $P = 0.443$ |
| *Mean* frequency of sexual intercourse per month *(SD)* | 2.88 (4.66) | 5.29 (7.78) | 6.58 (6.58) | $F(2, 86) = 0.700$, $P = 0.499$ |
| *Mean* frequency of pornography access per month *(SD)* | 11.69 (11.45) | 13.87 (12.94) | 15.00 (12.12) | $F(2, 86) = 0.219$, $P = 0.804$ |
| *Mean* age at first masturbation *(SD)* | 14.46 (5.84) | 12.58 (3.01) | 12.76 (2.17) | $F(2, 86) = 2.73$, $P = 0.071$ |
| *Mean* frequency of masturbation per month *(SD)* | 14.54 (11.63) | 16.68 (9.91) | 20.58 (15.73) | $F(2, 86) = 1.21$, $P = 0.304$ |
| Belief penis damaged through masturbation, n (%) (0 "*not at all*"—10 "*convinced*") | 3 (11.5) | 5 (16.1) | 4 (12.1) | Fisher's Exact Test $P = 0.859$ |
| **Sexual Orientation, n *(%)*** | | | | |
| Heterosexual | 19 (73.1) | 22 (71.0) | 26 (78.8) | Fisher's Exact Test $P = 0.790$ |
| Homosexual | 7 (26.9) | 9 (29.0) | 7 (21.2) | |

Table 3 shows scores between groups from each IIEF subscale. There was a significant effect of group on erectile dysfunction, orgasmic function, intercourse satisfaction and overall satisfaction after controlling for participant age. There were no differences in sexual desire between the groups. Post hoc analyses show that participants with BDD had significantly higher erectile dysfunction than controls. BDD participants had significantly lower orgasmic function than those with SPA and controls. Both BDD and SPA participants had lower intercourse satisfaction than controls. Overall satisfaction was significantly lower in men with BDD in comparison with the SPA and control group.

Significantly more men with BDD or SPA had both previously attempted to alter the size of their penis (Table 4). No controls reported any previous attempts to alter their size. There were no significant differences between BDD and SPA groups for both how many times they had attempted to alter the size of their penis, and the procedures they had tried. Reported frequencies were low, between 1 and 3, and the most commonly reported procedures tried were "exercises," specifically "jelqing." Reported success rates of all procedures tried were low.

## Discussion

This is the first study to investigate the sexual functioning and behavior of men with BDD related to their penis size in comparison with men with SPA and controls in the community. We confirmed our hypothesis that the BDD group would have difficulties in sexual functioning but not their sexual desire. It was a chronic problem of over 20 years in the BDD group and about 10 years in the SPA group. Differences also occurred between the groups in the frequency of attempts to alter their penis size or appearance. Men with no concerns made no attempts to alter their size whereas men with BDD or SPA did. Up to 80% of the SPA group had used a procedure such as "jelqing." This is a squeezing and stroking motion performed to force blood flow to the tip of the penis, hypothetically lengthening it. "Stretching" exercises can include tying weights to the penis. Two men had used a vacuum pump, which is a device used to draw blood up through the penis by creating a vacuum around it. Only one man had an "extender" stretching device which has been evaluated in one uncontrolled study [28]. Of note is that the success rates of the attempts were low and this

**Table 3** International Index of Erectile Functioning scores

| Measure | BDD group Mean (SD) n = 26 | SPA group Mean (SD) n = 31 | Control group Mean (SD) n = 33 | Comparison ANCOVA | Pairwise comparisons |
|---|---|---|---|---|---|
| | | | | | 1. BDD × SPA |
| | | | | | 2. BDD × Controls |
| | | | | | 3. SPA × Controls |
| Erectile dysfunction | 13.46 (11.32) | 18.70 (10.36) | 24.45 (7.08) | $F(2, 86) = 8.17$, $P = 0.001$ | 1. *Mean diff.* = 5.28, *S.E* = 2.78, $P = 0.183$ |
| | | | | | 2. *Mean diff.* = 11.04, *S.E* = 2.76, $P < 0.001$ |
| | | | | | 3. *Mean diff.* = 5.75, *S.E.* = 2.49, $P = 0.069$ |
| Orgasmic function | 5.31 (3.95) | 8.10 (2.60) | 9.45 (1.15) | $F(2, 86) = 16.47$, $P < 0.001$ | 1. *Mean diff.* = 3.08, *S.E* = 0.782, $P = 0.001$ |
| | | | | | 2. *Mean diff.* = 4.43, *S.E* = 0.776, $P < 0.001$ |
| | | | | | 3. *Mean diff.* = 1.35, *S.E* = 0.699, $P = 0.170$ |
| Sexual desire | 5.73 (2.76) | 6.17 (1.88) | 6.81 (1.94) | $F(2, 86) = 2.35$, $P = 0.102$ | — |
| Intercourse satisfaction | 3.81 (4.71) | 5.93 (4.79) | 9.61 (5.10) | $F(2, 86) = 8.25$, $P = 0.001$ | 1. *Mean diff.* = 1.60, *S.E* = 1.40, $P = 0.762$ |
| | | | | | 2. *Mean diff.* = 5.28, *S.E* = 1.39, $P = 0.001$ |
| | | | | | 3. *Mean diff.* = 3.68, *S.E* = 1.25, $P = 0.012$ |
| Overall satisfaction | 2.42 (2.59) | 3.77 (2.21) | 5.61 (2.47) | $F(2, 86) = 14.81$, $P = < 0.001$ | 1. *Mean diff.* = 1.85, *S.E.* = 0.610, $P = 0.010$ |
| | | | | | 2. *Mean diff.* = 3.66, *S.E* = 0.678, $P < 0.001$ |
| | | | | | 3. *Mean diff.* = 1.81, *S.E.* = 0.683, $P = 0.028$ |

supports previous research [11]. Increased advertising for solutions to increase penis size may be responsible for these findings. A simple search on Google will give hundreds of results for "solutions" to increase penis size; however the evidence for their efficacy is unproven and unlikely. However, such "solutions" are often risky, and clinicians should educate their patients to avoid any "solutions" that have no evidence base and develop an effective psychological therapy for such men.

There may be a disproportionate number of homosexual men who are at risk of developing SPA or BDD [23,24]. However there was no significant difference in sexual identity across the groups perhaps because of the perceived importance of penis size to women by heterosexual men [29]. The frequency of homosexual men was however relatively high in all three groups. There may be a bias in the recruitment of homosexual men who may have been more interested than heterosexual men in volunteering for our study. It may therefore be important to replicate the study in exclusively homosexual men.

One might expect the mean age of men losing their virginity to be *higher* for those with BDD influenced by their higher avoidance of intimacy. The non-significant finding could also be explained by the BDD and SPA group concerns having been initiated during or post first sexual experience, although one can only hypothesize at this point this could be further researched in future.

It is surprising that there was no significant difference between the groups' mean numbers of sexual partners and frequency of sexual intercourse per month although this may be a Type 2 error. One might have expected men with BDD who were concerned about their penis size to have had less sexual partners and a lower frequency of sexual intercourse per month given their higher reported avoidance and safety-seeking behaviors in comparison with controls. Men with penis size concerns could be engaging in as many sexual encounters as men without concerns for a number of different reasons. For example, men with penis size concerns might seek sexual encounters (i) in order to seek more opportunities to compare the size of their penis with others (if homosexual) as a form of "checking," (ii) in order to seek acceptance or reassurance from others that their size is adequate—another safety-seeking behavior or (iii) their sexual drive could over-ride psychosocial processes that reduce the functioning of these men in other important areas of life. Indeed, the IIEF scores do indicate that men with penis size con-

**Table 4** Interventions tried to alter the size or appearance of the penis, and their success rates

| Measure | BDD group n = 26 | Small penis anxiety group n = 31 | Control group n = 33 | Comparison |
|---|---|---|---|---|
| Previous attempt to alter the shape or size of the penis, n *(%)* | 11 (42.3) | 10 (32.3) | 0 (0) | Fisher's Exact Test $P < 0.001$ |
| Mean number of procedures tried *(SD)* | 1.75 (0.75), | 1.36 (0.67) | *n/a* | $t(20) = .–1.29$, $P = 0.211$ |
| Type of procedure n *(%)* | | | | |
| Exercises | 2 (18.2) | 8 (80) | | |
| Pump | 2 (18.2) | 0 (0) | *n/a* | Fisher's Exact Test $P = 0.083$ |
| Elastic stretching device | 1 (9) | 0 (0) | | |
| Viagra | 1 (9) | 0 (0) | | |
| Multiple procedures | 5 (45.5) | 2 (20) | | |
| Mean cosmetic success of procedure (0–8) *(SD)* | 2.67 (2.31) | 5.00 (1.87) | *n/a* | $t(20) = 1.58$, $P = 0.166$ |
| Mean reduced preoccupation with size concern following the procedure (0–8)*(SD)* | 1.67 (2.08) | 4.17 (2.40) | *n/a* | $t(20) = 1.53$, $P = 0.170$ |

cerns do not differ in their sexual functioning, desire or satisfaction. Men with a concern may be utilizing their higher levels of safety-seeking behaviors such as hiding their penis (e.g., in a dark setting) in order to feel more comfortable engaging in sexual intercourse. Furthermore, modern technology such as internet dating sites could be increasing opportunities for men to find sexual partners without the social interactions that might have previously hindered their ability to build a sexual relationship. In fact, two men with BDD from the current sample did freely comment that websites and mobile phone applications which are aimed at finding "quick fix sexual encounters" had made them feel that any humiliation felt from comments on their penis size could be short lived when engaging in purely one-time sexual encounters. However, these are of course all only hypotheses, and further research is required to investigate these possibilities.

It is of interest that the current sample did not differ in levels of pornography access or masturbation. For example, previous findings indicated that the majority of men with penis size concerns are comparing their size with images they see in pornography, which contributes to the maintenance of their BDD as a safety-seeking behavior. Therefore concerned men may not be watching pornography purely for sexual gratification. However, of note, internet statistics now report that pornography websites are among the most frequently visited sites worldwide [30], and therefore it is conceivable that watching pornography may not be linked to the psychopathology of small penis anxiety and rather is now considered the "norm." It may also be of interest to know the type of pornography viewed by heterosexual men—for example, are men with BDD or SPA more likely than men with no concerns to access pornography that includes men, with which to compare their size? Again, this hypothesis would need to be investigated through further research.

It is possible that some of the non-significant findings may have been influenced by the size and recruitment of an opportunistic sample. Our sample may not be representative of men who present to urologists, sexual heath or psychiatric services who may be more depressed or presenting with sexual dysfunction, which may be less stigmatizing and a more medical problem. Equally sexual dysfunction may be a moderating factor affecting outcome in those with BDD or SPA. The sample may be more representative however of men in the community who are searching for solutions to penis size concerns on the Internet. Therefore, this study will need to be replicated in a clinical setting to determine if our sample is representative. DSM-5 has added a further criterion in BDD for repetitive behaviors (including comparing a feature) but this is unlikely to have made any significant difference to the composition of our sample diagnosed as BDD. Further research should investigate homosexual and heterosexual men separately in a larger sample. However large clinical samples (heterosexual or homosexual) with BDD and SPA are hard to recruit, as such men are avoidant of seeking help and highly stigmatized. However, non-significant findings may also truly indicate that sexual functioning and behavior are not strong predictors of penis size concerns.

Our sample judged their own interventions of exercises and vacuum pumps to be unsuccessful. Further research is now needed to consider specific interventions that may help such men. Cosmetic phalloplasty is not indicated [11]. There are evidence-based treatments for BDD for other bodily features, namely cognitive behavior therapy (CBT) and a selective serotonin reuptake inhibitor

[31–34], but they have not been adapted or evaluated for men with penis size concerns. Men with SPA might be helped by psycho-education and counselling but again there are no randomized controlled trials to evaluate any intervention.

Overall, the clinical implications of the findings are that professionals should be made increasingly aware of the presentation of men with penis size concerns, the great lengths that such men may go to change their size, and how they might adapt their approach to such patients. It is important that professionals act by validating clients body image concerns and developing a psychological intervention for these men rather than just focusing on any sexual dysfunction (which is often reported by such men).

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**Corresponding Author:** David Veale, MD, FRCPsych, Centre for Anxiety Disorders and Trauma, The Maudsley Hospital, 99 Denmark Hill, London SE5 8AZ, UK. Tel: +44 203 228 4146; Fax: +44 203 228 5215; E-mail: david.veale@kcl.ac.uk

*Conflict of Interest*: The authors report no conflicts of interest.

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